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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,999	10/30/2003	Hidenobu Kamizono	Q77868	5659

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EXAMINER

DINH, DUC Q

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/695,999	Applicant(s) KAMIZONO, HIDENOBU	
	Examiner DUC Q. DINH	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) 5-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 5-8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/13/06 is acknowledged.

Claim Rejections - 35 U.S.C. § 103

2. The following is a quotation of 35 U. S. C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knox et al. (US patent No. 5,909,210), hereinafter, Knox.

In reference to claim 1, Knox (figure 3) teaches a keyboard device (80) for key inputting by selecting any one of two functions (Knox teaches that the two functions are, typing function and positional function) (col. 11, lines 21-31), which are performed by certain keys (90; [any] one of the functions, i.e. typing function performing by certain keys 90) on a keyboard (80), wherein hands of a user present at the keyboard are detected by sensor (74), and one of the two functions performed by the certain keys is selected based on the result of the detection by the sensor (Knox teaches in the alternative embodiment that the switching from the cursor positional

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function to the typing function is carried out by detecting multiple fingers, and the switching from the typing function to the cursor positional function is carried out when a single finger is detected) (col. 11, lines 31-41).

Knox does not expressly teach that the sensor detects the hands of a user at the home position. However, home position is the position, which the user has his hand on the keyboard when he starts typing. As indicated above, Knox teaches that when multiple fingers is detected by the sensor, the mode changes to typing position (col. 11, lines 31-41). Therefore, the multiple fingers detected by the sensor would be detected when the user is about to start typing (i.e., when the hand on home position).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to realize that, when the multiple fingers are detected by the sensor in Knox's device, the user would have his fingers in the home position because such position is usually the normal position which is taking by the user when he starts typing. Such position facilitates and expedites the typing on the keyboard.

As to claim 12, the claim is a broader version of claim 1 and is analyzed as previously discussed with respect to claim 1.

5. Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knox as applied to claims 1 and 12 above, and further in view of Hiller (US Patent NO. 6,396,483).

In reference to claims 2 and 13, as discussed above, Knox teaches all the limitations of claim 2 except the citation that the certain keys are ten-key section provided with numeric input function and cursor shift function.

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However, Hiller (figures 1 & 3-4) teaches a keyboard (100) wherein only a ten-key section (105) can be switched between a numeric keypad function and a cursor positioning function (abstract and col. 3, lines 12-32).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Knox's keyboard device using Hiller's teaching of having only the numerical-key section (ten-key section) switches between the two functions (numeric input and cursor positioning) so as motivated by Hiller, because the numeric keypad is seldom used, an opportunity is therefore presented to make more effective use of this area (by using the same keys in both numerical input mode and cursor positioning mode) without sacrificing the functionality of a numeric keyboard (col. 2, lines 33-39). Furthermore, by allowing only the numerical key section to be switched between the two functions, the rest of the keys in the keyboard will be free to be used for typing while the numerical key section is used for cursor positioning increase the speed and the efficiency of data entry.

6. Claim 3 is rejected under U.S. C. 103 (a) as being unpatentable over Sellers (US patent No. 5,864,334) in view of Knox.

In reference to claim 3, Sellers (figure 1) teaches a keyboard device (10) for key inputting by selecting any one of two functions (typing function and cursor position function) (col. 5, lines 57-59) affected by certain keys (29) on a keyboard (28). Seller teaches a sensor (camera 52) for detecting the hand of the user above the keyboard (step 98 of figure 8) (col. 8, lines 25-28), a function switching (58) to select one of the two functions by pressing a key (col. 6, lines 30-41), *a sensor validating/invalidating switch to changeover the validation/invalidation of the*

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detection result of the sensor (steps 98 and 106 of figure 8 which validate the hand configuration in the observation zone) (col. 8, lines 25-28 and 37-45).

Sellers also teaches a control section for selecting one of the two functions according to the detection result of the sensor when the sensor validating/invalidating switch is validated (figure 8, YES or NO in step 98, and then YES in step 106 for generating a pick signal to have the device act as cursor positioning; or YES or NO in step 98, then NO in step 106, then NO in step 112 and then YES in step 114 to have the device switch back to the typing mode using hand movement without using the switch 58), and by the function switching key (58) when the validating/invalidating switch is invalidated (figure 8, NO in steps 98 and 106 and then YES in step 112 for switching from the cursor positioning mode to typing mode and YES in step 94 to switch back to cursor mode using only the switch 58 without detecting the hand) (col. 8, lines 12-54).

Sellers does not teach that the sensor detects whether hands of a user are present at home position. Note that, in step 114 of figure 8, Sellers teaches that to change from cursor mode to typing mode without using the switch (58), the sensor has to detect the re-entry of the hand and pressing any. Such teaching may suggest having the user in typing position when detected. But the mode changes is instigated when the hand re-entry is detected and any key is depressed, and not upon sensing the hand only.

However, home position is the position, which the user has his hand on the keyboard when he starts typing. Knox teaches that when multiple fingers are detected by the sensor, the mode changes to typing position (col. 11, lines 31-41). Therefore, the multiple fingers detected

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by the sensor would be detected when the user is about to start typing (i.e., when the hand on home position), and the mode changing is instigated when the hand is detected.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Knox's teaching of having the switching to one of the two functions carried out by detecting the user's, hand in home position, to be incorporated to Sellers's device because such position is usually the normal position which is taking by the user when he starts typing. Such position facilitates and expedites the typing on the keyboard. Furthermore, switching to typing mode upon sensing the user's hand will accelerate the switching and therefore, accelerate the entry of data.

7. Claim 4 is rejected under 35 U. S. C. 103 (a) as being unpatentable over Sellers and Knox as applied to claims 3 and 5 above, and further in view of Hiller.

In reference to claim 4, as discussed above, Sellers and Knox teach all the limitations of claim 4 except the citation that the certain keys are ten-key section provided with numeric input function and cursor shift function.

However, Hiller (figures 1 & 3-4) teaches a keyboard (100) that includes a ten-key section (105), which has a numeric keypad function and a cursor positioning function (abstract and col. 3, lines 12-32).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Sellers's keyboard device using Hiller's teaching of having only the numerical-key section (ten-key section) switches between two functions (numeric input and cursor positioning) so as motivated by Hiller, because the numeric keypad is seldom used, an

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opportunity is therefore presented to make more effective use of this area (by using the same area in both numerical input mode and cursor positioning mode) without sacrificing the functionality of a numeric keyboard (col. 2, lines 33-39). Furthermore, by allowing only the numerical key section to be switched between the two functions, the rest of the keys in the keyboard will be free to be used for typing while the numerical key section is used for cursor positioning increase the speed and the efficiency of data entry.

Response to Arguments

8. Applicant's arguments filed June 23, 2006 have been fully considered but they are not persuasive.

With respect to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., positional function is not effected by the keys of the keyboard *as required by the claim* [see page 6 of the Remark]; the positional function is effected by certain keys) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, Knox teaches the typing function performed by certain keys (90) on the keyboard (80) satisfying the claimed limitation as recited in claim 1.

With respect to the feature that a sensor detects a hand of the user (see page 7 of the Remarks); as indicated above, Knox teaches that when multiple fingers detected by the sensor, the mode changes to typing position that are performed by certain keys (90) on keyboard (80) (col. 11, lines 31-41). Therefore, it would have been obvious to a person of ordinary skill in the

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art at the time the invention was made to realize that, when the multiple fingers (of the hand) are detected by the sensor in Knox's device, the user would have his fingers in the home position because such position is usually the normal position which is taking by the user while typing on a regular keyboard. Such position facilitates and expedites the typing on the keyboard.

Applicant's argument with respect to the Obviousness-type double patenting is persuasive. The Double Patenting Rejection is withdrawn.

The Art rejection, however, is maintained.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUC Q. DINH whose telephone number is (571) 272-7686. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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DUC Q DINH

Examiner

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A handwritten signature in cursive script, appearing to read "Ducdenh", written in black ink.

DQD

January 18, 2007